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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,772	12/11/2001	William T. O'Grady	10011044-1	9907

7590 12/01/2004

AGILENT TECHNOLOGIES  
Legal Department, 51U-PD  
Intellectual Property Administration.  
P.O. Box 58043  
Santa Clara, CA 95052-8043

EXAMINER
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ORTIZ RODRIGUEZ, CARLOS R

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/014,772

Applicant(s)

O'GRADY ET AL.

Examiner

Carlos Ortiz-Rodriguez

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-22 rejected under 35 U.S.C. 102(b) as being anticipated by George U.S Patent No. 5,657,252.

Regarding claim 1 and 12 George discloses an interface between an automation host and a plurality of tools used to perform a processing step, the interface comprising: a single communications and process behavioral connection interface to the automation host (Fig 1 and C2 L58-65, single interface connection to SEMI GEM compliant SECS-II Host 10; the GEM standard defines process behavioral, SECS is a coordinated pair of standards that defines a serial communications interface between equipment and a host.); and, a plurality of virtual host interfaces (element 16), each virtual host interface from the plurality of virtual host interfaces providing a communications and process behavioral interface to one of the tools (SEMI GEM compliant tools 18) in the plurality of tools (SEMATECH's Virtual Equipment Interface VFEI provides the interface; C3 L 58-61); wherein the automation host can control and coordinate operation of all tools in the plurality of tools via the single communications and process behavioral connection interface (C5 L 33-37). (For further reference also see VFEI Concepts section of Virtual Factory Equipment Interface: Version 2.2)

Regarding claim 2 and 13, a number of virtual host interfaces is variable depending upon a number of tools in the plurality of tools is inherent to George (Fig 1 plurality Factory Equipment 18).

Regarding claims 3 and 14, George discloses an interface wherein the plurality of virtual host interfaces implement different communications and process behavioral interface for different tools from the plurality of tools (C3 L20-65).

Regarding claims 4 and 15, the single communications and process behavioral connection interface makes the plurality of tools appear to the automation host as a single tool is inherent to George (Fig 1 element 12).

Regarding claims 5-7 and 16-18 a state machine scenario determinator that aggregates process state models for the plurality of tools into a single process state model, aggregates control state models for the plurality of tools into a control process state model, and aggregates port state models for the plurality of tools into a single port state model is inherent to George (C3 L58-63).

Regarding claims 8 and 19, George discloses a process variables set and variable identification numbers of tools from the plurality of tools are aggregated into a single process variable set and variable identification number range for the plurality of tools (C7 L19-38).

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Regarding claims 9 and 20, George discloses a host concentrator that aggregates communication message sets of individual tools from the plurality of tools into a single communications message set for the plurality of tools (C1 L50-61).

Regarding claims 10 and 21, George discloses each virtual host interface from the plurality of virtual host interfaces is compliant with the Semiconductor Equipment Manufacturers Institute (SEMI) generic equipment model (GEM) interface requirements (C2 L58-65 and C5 L30-44).

Regarding claims 11 and 22, George discloses the single communications and process behavioral connection interface to the automation host is compliant with the Semiconductor Equipment Manufacturers Institute (SEMI) generic equipment model (GEM) interface requirements (C2 L58-65 and C5 L30-44).

***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to virtualized generic equipment model data and control router for factory automation:

- a. U.S. Pat. No. 6,526,134 to Wallenius, which discloses call set-up by an intelligent network.
- b. U.S. Pat. No. 6,587,744 to Stoddard et al., which discloses run-to-run controller for use in microelectronic fabrication.

c. U.S. Pat. No. 6,760,775 to Anerousis et al., which discloses system, method and apparatus for network service load and reliability management.

The following publications are cited to further show the state of the art with respect to virtualized generic equipment model data and control router for factory automation:

d. Deng et al., "Development of an Object-Based Equipment Controller for Semiconductor Equipment Communications"; IEEE, 1999; pages 1240-1245.

e. DeBolt et al., "Implementation of the SEMI, Generic Equipment Model, Using Object-Based Cell Technology"; IEEE, 1991; pages 102-105.

f. Ghiselli, "Practical Aspects of the GEM Model for Factory Automation"; IEEE, 1990; pages 50-54.

g. Nguyen, "The Development and Implementation of a Cell Controller Framework"; IEEE, 1993; pages 54-57.

h. Zaniolo, "The Database Language GEM"; ACM, 1983; pages 207-218.

i. Cisco IOS IP Configuration Guide, "Configuring PGM Host and Router Assist".

j. Sematech, "Virtual Factory Equipment Interface (VFEI): Version 2.2"; 1995, pages 1-93.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Ortiz-Rodriguez whose telephone number is (571) 272-3747. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The central official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703)308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

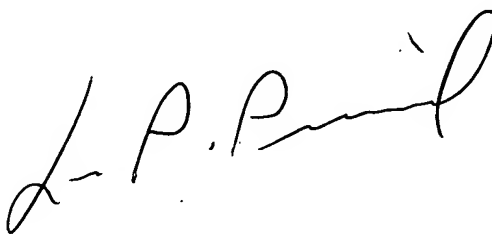
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Carlos Ortiz-Rodriguez  
Patent Examiner  
Art Unit 2125

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November 26, 2004

A handwritten signature in black ink, appearing to read "L. P. Picard". The signature is fluid and cursive, with a large loop at the end.

LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100